

MEMORANDUM			
To:	Mary Catherine Snyder, SDOT Meghan Shepard, SDOT	Date:	September 30, 2005
From:	Jennifer Lowe	TG:	05085
cc:	Kathleen Govern, OMG		
Subject:	Findings for Downtown Ballard On-Street Parking Analysis		

This memorandum summarizes the results of on-street parking data collection efforts for the Downtown Ballard study area. The Seattle Department of Transportation (SDOT) contracted with the Transpo Group to coordinate this data collection effort. The purpose of the study, which will also include data collection in other areas of Seattle, is to establish a baseline of information of utilization, duration and turnover in both metered and non-metered on-street parking spaces and to make decisions regarding modifications to existing management of on-street parking spaces.

Data Collection

Data were collected in Ballard for approximately 53 blockfaces^{1 2} that were subdivided into five subareas. These subareas are identified in Figure 1. Prior to actual vehicle observation, an inventory of all on-street parking spaces on the study area blockfaces was collected. The inventory collected information on current management (metered, unmetered, time limitations etc.). In areas where parking was unmetered, an estimate was made as to the apparent supply.³ The data collection for utilization, length of stay, etc. occurred on: Thursday, May 12; Wednesday, May 18, and; Tuesday, May 24 from 8 AM to 6 PM. The temperature on these days was relatively clear with temperatures in the high fifties and low sixties (degrees Fahrenheit). During this time period, each parking space was observed every half hour, and license plate information (three-digit) was recorded into a hand-held data device. This information was then downloaded and summarized in reports for further analysis⁴.

¹ In the study area, blocks north of Market Street are on a grid where east/west streets each span the equivalent of two blockfaces. The reference to 53 blockfaces considers each of these “double blockfaces” as two blocks.

² Ideally the data collected would have included the east side of 24th Ave NW between NW 56th and 57th Streets. While the block is currently signed for 2-hour parking, due to construction in the area, that parking was not available. Approximately six to eight parking spaces are typically available on this block face.

³ As license plate and utilization information was collected, there were instances where actual parking exceeded the original estimated parking supply. These data were first noted in the data download as “squeeze-ins”. The inventory was typically modified to include those “squeeze-in” spaces as actual available parking, and they now appear as spaces in the inventory. However, there were also situations where vehicles were parked along blockfaces that were metered. These vehicles managed to find curb space parking and parked as if it were unlimited, unmetered parking. When identified as such, these vehicles were considered to be parked as if in “no parking” zones as, realistically, they were not parked in intended parking spaces. Every attempt was made to clean the data accordingly.

⁴ Data collection in field collected by All Traffic Data. Data processing by Operations Management Group (OMG).



NOT TO SCALE

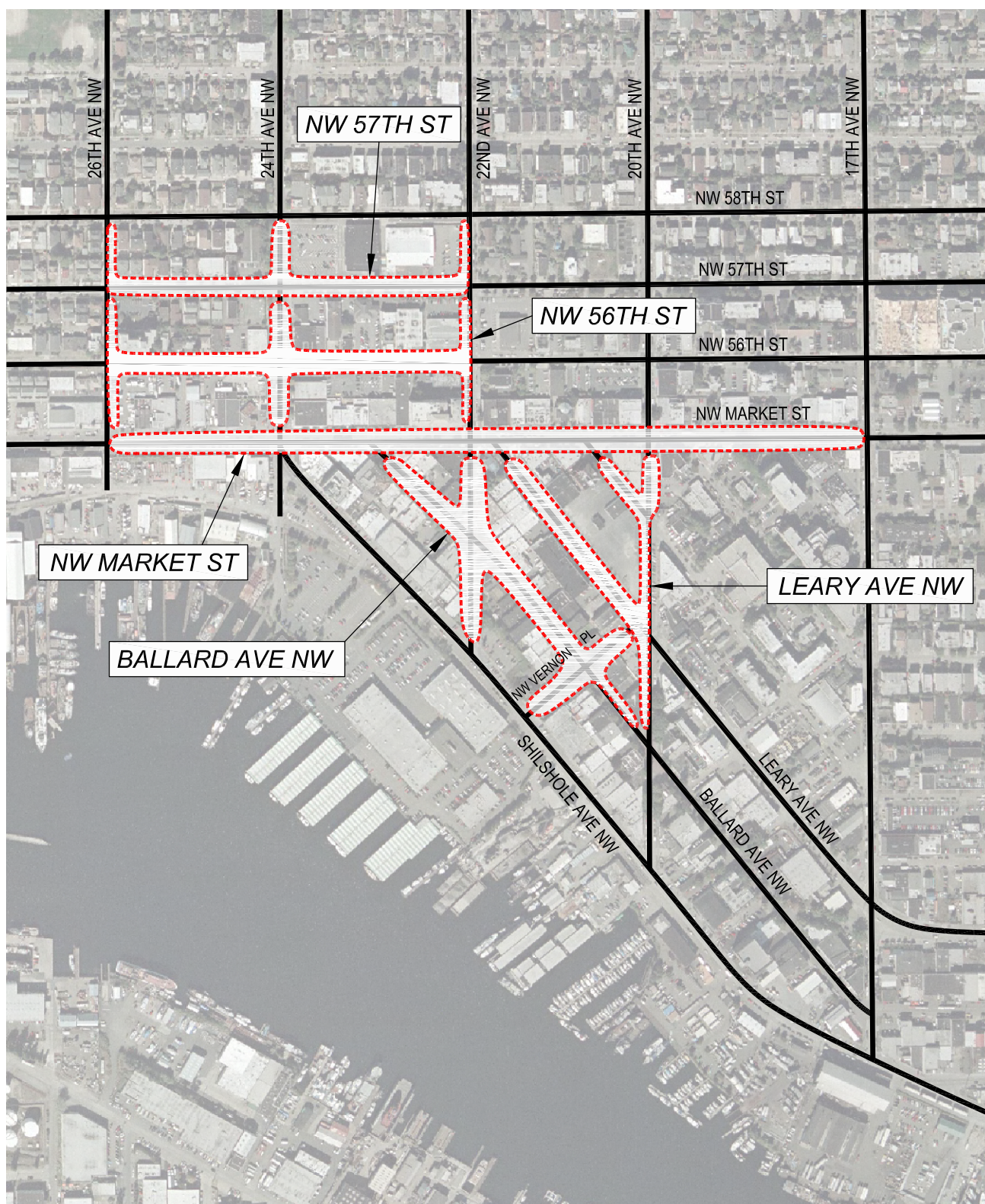


Figure 1
Study Subareas

SDOT Parking Data Collection

Parking Space Inventory

Generally, the characteristics of the inventory of parking spaces in the five Ballard study subareas are summarized in Table 1. There are a variety of different types of on-street parking spaces within the study area. This report focuses on general time-limited and unlimited parking spaces. Loading zones, spaces reserved for police vehicles, and those for the disabled are combined into an “other” category. Details on these parking spaces are included in the detailed data tables, in attachments to this report. Note that some spaces are designated differently at different times of day. For example, some spaces are marked “No Parking” during morning and/or evening commute peak hours (7 am to 9 am and/or 3 pm to 6 pm) to allow for additional road capacity. The designations in Table 1 are determined by how the space is designated at 1:00 PM, which in this study area represents the designation for the majority of the daytime hours. Table 1 provides the number of each type of parking space in each subarea. (Note: footnote on page one describes how “squeeze-in” parking was handled in the inventory and subsequent data analysis.)

1. Number and Type of Parking Spaces by Subarea (at 1:00 PM)

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		36	7	15	10
2 Hr	142	11	26	13 ⁵	5
Half Hour					3
Quarter Hour			1		
Unrestricted	36	62			103
Total Other	9	10	16	11	2
Total	187	119	50	39	123
METERED					
2 Hr	14		30	66	
Half Hour			3	2	
Quarter Hour			3		
Total Other		2			
Total	14	2	36	68	0
TOTAL ALL	201	121	86	107	123

⁵ Another approximately six to eight 2-hour parking spaces are available on the east side of NW 24th Avenue between 56th and 57th Streets. However, due to construction of the adjacent property, parking was prohibited during data collection. Because we were unable to include utilization information in the statistical analysis of the data, these spaces are not included in the inventory table.

General Characteristics of Ballard Study Subareas

Ballard Avenue NW Subarea

The Ballard Avenue NW subarea consists of approximately ten blockfaces (note: see footnote 1 on page 1). It includes the blockfaces on Ballard Avenue NW between NW Market Street and 20th Avenue NW, blockfaces on 22nd Avenue NW between Shilshole Avenue NW and NW Market Street, and blockfaces on NW Vernon Place between Shilshole Avenue NW and 20th Avenue NW. Several small retail shops, restaurants and services, located in historic buildings, line Ballard Avenue NW. Many of these buildings have residential units located above. The businesses in this subarea rely on the quick turnover of the on-street parking spaces to serve their customer base. There is just one block segment in this study area, 22nd Avenue NW between Ballard Avenue NW and NW Market Street that has meters (2-hour meters). Well over three-quarters of the street parking spaces are time limited to 2-hours. Diagonal curb parking at the north end of this study area helps increase the parking supply, where the roadway is designated for northbound traffic only. The unlimited parking places are primarily along the cross-streets, NW Vernon Place and 22nd Ave NW, where there are some multi-family residential units and more service-oriented small businesses. According to the City of Seattle, the five unrestricted parking spaces on the east side of 22nd Ave NW between NW Market Street and Ballard Avenue NW originally had parking meters and are slated to be included in the pay station conversion that will occur in the area in Fall 2005.

Leary Avenue NW Subarea

The Leary Avenue NW subarea includes the long blockfaces between NW Market Street and 20th Avenue NW, Russell Avenue NW between NW Market Street and 21st Avenue NW (note while there is no 21st Avenue NW in this area, it is the midpoint between 22nd Avenue NW and 20th Avenue NW), and portions of 20th Avenue NW between NW Market Street and Ballard Avenue NW. This subarea has fewer restaurants than the Ballard Avenue NW subarea. Businesses tend to be more of the service type, particularly in the south end of the subarea (auto repair, professional services). A large multi-family residential/retail project is currently under construction at the northwest corner of the Leary Avenue NW/20th Avenue NW intersection. There are no meters, but over one-third of the parking is time limited (1- and 2-hour limitations).

NW Market Street Subarea

The NW Market Street subarea covers both sides of NW Market Street between 26th Avenue NW and 17th Avenue NW. Land uses are a combination of retail, banks and restaurants, with many of the buildings having upper-story offices. While the businesses rely on on-street parking, some have off-street parking on the back side (fronting NW 56th Street). The Majestic Bay Cinema, in the center of the study area, and the Swedish Medical Center - Ballard, located at the east end of the study segment, appear to be the largest individual parking generators in the study area. Parking is all time limited, about equally split between metered and unmetered. Most of the meters are on the east end of the study area, near Swedish Ballard. Notably, the two blocks of NW Market Street between 20th Avenue NW and 24th Avenue NW are unmetered, though the street is otherwise metered to the east and west.

NW 56th Street Subarea

This subarea includes the portion of NW 56th Street between 24th Avenue NW and 20th Avenue NW, and the side streets of 24th Avenue NW (east side only), 22nd Ave NW (both sides) and 20th Avenue NW (west side only) between NW Market Street and NW 57th Street. The south side of NW 56th Street has off-street parking for several businesses that front NW Market Street. The larger parking generators in this area are the Seattle Public Library's Ballard Branch and Neighborhood Service Center and Bartell's Drug Store, all located on 22nd Avenue NW between NW 56th and NW 57th Streets. The Library and Neighborhood Service Center opened May 14, 2005, during the data collection period. There are several more service-oriented businesses on NW 56th Street.

The majority of the parking in the study area consists of 2-hour meters (66 of 107 spaces), with another 15 one- and 13 two-hour unmetered spaces in the study area. There are two half-hour meters on 22nd Ave NE. All other parking is designated as loading or "other". A new condominium project is under construction on the west end of the block of 24th and 22nd Avenues NW/NW 56th and 57th Streets. The east side of 24th Avenue NW, between 56th and 57th Street is signed for 2-hour parking (no meters). We estimate that approximately six to eight vehicles can park on this block face. However, due to construction on the adjacent site, the on-street parking was temporarily restricted during our data collection. Therefore no utilization information was collected.

According to the City of Seattle, the on-street spaces around the new Seattle Public Library on NW 56th Street (north side) and 22nd Avenue NW (east side) were originally 2-hour parking meters. Upon completion of the Library's new sidewalk, the City of Seattle installed 2-hour time-limit signs so as to reserve this area of the sidewalk until pay stations arrive in Ballard in Fall 2005.

NW 57th Street Subarea

This subarea includes NW 57th Street between 24th Avenue NW and 20th Avenue NW and the one block segments between NW 57th Street and NW 58th Street on 24th Avenue NW (east side only), 22nd Avenue NW (both sides) and 20th Avenue NW (west side only). NW 57th Street is adjacent on the north side to the new Ballard Public Library and Neighborhood Service Center. The large parking generator is the QFC, which also provides off-street parking. A new mixed-use development with a QFC and residential units is planned for this site. Land uses include banks, small service-oriented shops, the library, retailers, churches, and Leif Erikson Hall. A new community park, the Ballard Commons, is under construction on the eastern half of the block adjacent to the QFC. The condominium project on 24th Avenue NW will also have frontage on NW 57th Street. Most of the parking is unrestricted and there are no meters. There are both single-family and multi-family residential uses on the north side of NW 57th Street within the study area, and on NW 58th Street, just to the east and north of the study area.

Effectiveness

Parking management measures, such as meters or pay stations, time limitations and special zones help influence parking behavior. Certain behaviors are desired, based on the types of surrounding land uses. For example, retail stores often rely on on-street parking to serve customers' parking needs, especially if

adequate off-street parking is not available. Therefore, near retail establishments, frequent turnover is desired. When parking supply in an area is scarce or expensive, long-term parkers will often park on-street, especially if it is free and/or allows for a long period of parking.

The extent that on-street parking management measures are successful in influencing the desired parking behavior can be measured in several ways. The following indicators show how effective parking management is in:

- Encouraging turnover of parking spaces;
- Reducing occupancy of on-street spaces so that business-needed spaces are readily available; and
- Encouraging parkers to observe the posted or metered parking limitations.

These things can be measured by considering:

- The number of parkers that comply with posted and metered limitations;
- Turnover, which is the number of unique cars that park in a parking space over a day;
- Duration, which is the length of time a vehicle stays in a parking space; and
- Utilization, or the percentage of occupied parking spaces.

Findings

The following tables summarize those findings that help determine effectiveness of current management measures and help indicate what different measures may be appropriate.

Table 2 summarizes the percent of vehicles that were parked longer than the signed or metered time limitations in each subarea. In general, the percent of parkers that stay beyond the time limitations is more for unmetered than metered spaces. While there are no metered 1-hour spaces in the study area, for 2-hour parking, the unmetered spaces experience 6% to 19% exceedence of the time limit, while metered spaces experience 3% to 4% exceedence. The exception is the unmetered 2-hour parking in the NW 57th Street subarea, where none of the vehicles using the approximately five parking spaces exceeded the time limit. All parking with limits of a half-hour or less experience high levels of time limit exceedence, regardless of whether they are metered or not.

Table 2. Percentage Exceeding Time Limitation

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		28%	12%	15%	47%
2 Hr	14%	19%	6%	6%	0%
Half Hour					56%
Quarter Hour			100%		
Unrestricted	na	na			na
METERED					
2 Hr	0%		3%	3%	
Half Hour			25%	45%	
Quarter Hour			0%		

Table 3 provides the measured average length of stay for vehicles in each type of parking in each subarea. Note that these numbers understate the actual length of stay, as vehicles that were parked at the last observation period may have stayed beyond the duration they were measured for. Generally, those in metered spaces tended to stay less than those in the unmetered parking. For example, at the metered 2-hour parking the average length of stay was under an hour. In the unmetered parking the average was typically over one hour. In the unrestricted parking, the average length of stay ranged from almost three to four-and-a-half hours. While this may, in some cases, be related to the types of businesses near which the meters are located, the trend is significant enough to indicate that the presence of meters reduces the length of parked time. *Note that numbers are given in portions of hours. For example, 1.25 is equivalent to one and one-quarter hour or one hour and fifteen minutes. 0.89 indicates an average stay of just under one hour.*

Table 3. Average Length of Stay Per Vehicle (in hours)

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		1.39	0.77	0.80	1.88
2 Hr	1.39	1.64	0.89	1.14	1.05
Half Hour					0.70
Quarter Hour			1.5		
Unrestricted	3.87	2.74			4.29
METERED					
2 Hr	0.85		0.87	0.78	
Half Hour			0.66	0.88	
Quarter Hour			<0.50 ⁶		

Tables 4 and 5 provide the average occupancy, or utilization, of parking spaces in the subareas. Table 4 provides the averages for occupancy over the entire course of the ten hour period of data collection, from 8 AM to 6 PM. Many businesses in the area do not open until mid-morning. For this reason, we also provide average occupancy that excludes the hours before 10 am. Table 5 includes the averages over this shorter time period. The average is for an eight hour period, from 10 am to 6 pm.

It should be noted that the percent occupancy varies greatly by block face. It is important to look specifically at individual blockfaces when making decisions about which management techniques to apply.

⁶ Because field data was collected every half hour, for the quarter hour meters a vehicle was only considered to be over limit if it was seen in the same space two or more times in consecutive checks. Therefore, the average length of duration shows as thirty minutes. The percent exceeding time limit was measured to be zero (0%). That indicates that no vehicle was seen in these spaces in two consecutive checks. There may have been additional vehicles that utilized these spaces that were not recorded and there would be time between checks for vehicles to make very quick stops and not be included in the field count.

Generally, occupancy is higher for the unmetered parking, with the exception of the half-hour metered parking (two spaces) in the NW 56th Street subarea.

Table 4. Average Percent Occupancy from 8AM to 6PM

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		57%	55%	52%	83%
2 Hr	75%	63%	69%	79%	46%
Half Hour					23%
Quarter Hour			67%		
Unrestricted	87%	80%			83%
METERED					
2 Hr	58%		44%	49%	
Half Hour			35%	88%	
Quarter Hour			28%		

Table 5. Average Percent Occupancy from 10 AM to 6 PM

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		61%	61%	58%	84%
2 Hr	81%	73%	72%	81%	51%
Half Hour					29%
Quarter Hour			67%		
Unrestricted	87%	82%			83%
METERED					
2 Hr	70%		48%	68%	
Half Hour			39%	94%	
Quarter Hour			29%		

Table 6 provides the calculated number of hours each type of parking in each subarea exceeded 75% occupancy between 8 am and 6 pm (maximum ten hours). Table 7 provides the calculated number of hours each type of parking exceeds 75% occupancy between 10 am and 6 pm (maximum eight hours). As with the other tables, this information should be considered along with an understanding of the total number of parking spaces of each type that are actually in each subarea. As shown, the unrestricted parking in the Ballard Avenue NW, Leary Avenue NW and NW 57th Street (essentially all of the unrestricted parking in the study area) is over 75% occupied much of the day. Some of the unmetered parking on NW 56th Street and NW 57th Street subareas is also highly occupied much of the day, while the metered is not. The exception, again, are the two half-hour metered spaces in the NW 56th Street subarea.

Table 6. Number of Hours between 8 AM and 6 PM Percent Occupancy Is 75% or Greater (Max 10)

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		0.0	2.0	0.5	7.5
2 Hr	7.5	3.0	4.0	8.0	1.5
Half Hour					0.0
Quarter Hour			1.5		
Unrestricted	9.0	8.0			8.5
METERED					
2 Hr	4.0		0.0	0.5	
Half Hour			0.0	8.0	
Quarter Hour			2.5		

Table 7. Number of Hours between 10 AM and 6 PM Percent Occupancy Is 75% or Greater (Max 8)

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		0.0	2.0	0.5	6.0
2 Hr	7.5	3.0	4.0	6.0	1.5
Half Hour					0.0
Quarter Hour			1.5		
Unrestricted	7.0	8.0			7.0
METERED					
2 Hr	3.5		0.0	0.5	
Half Hour			0.0	7.0	
Quarter Hour			2.0		

Table 8 provides the turnover, by parking type in each subarea. Parking turnover is another indication of how well the parking is serving adjacent land uses. As previously defined, turnover represents the average number of unique cars that park in a parking space over the course of the day. Those parking spaces with a shorter time limitation should produce a much higher turnover than unlimited and longer permitted parking duration. For example, spaces designated for a 2-hour limitation, a turnover of 3.0 or higher is desired, while 1-hour designated spaces should have a turnover of 6.0 or higher. While the unrestricted parking spaces experience a relatively low turnover, the 1-hour and 2-hour unmetered parking experience turnovers similar to each other. The two-hour metered parking experiences less turnover than the two-hour unmetered parking, but this is also reflective of lower utilization. This may be the result of parkers opting for unmetered parking over metered parking.

Table 8. Parking Space Turnover

Restriction (at 1:00 PM)	Ballard Avenue NW	Leary Avenue NW	NW Market Street	NW 56 th Street	NW 57 th Street
UNMETERED					
1 Hr		3.86	7.14	6.53	4.30
2 Hr	5.25	3.91	7.46	6.92	4.40
Half Hour					3.00
Quarter Hour			1.00		
Unrestricted	2.19	2.9			1.91
METERED					
2 Hr	6.29		5.10	6.27	
Half Hour			5.33	10.00	
Quarter Hour			5.67		

Parking Management Techniques

Parking turnover, utilization, and compliance with the time-limits are three critical measures in determining when actions, such as adding new parking pay stations, should be taken. As a general rule of thumb, in the urban environment, parking turnover is typically three to four times greater than for off-street parking (Parking, Weant and Levinson). Each space used by workers turns over once daily, while each space used by business or shopper parkers turns over several times each day. Therefore, as noted previously, in a ten-hour study period, to best serve commercial uses, **in spaces designated for a 2-hour limitation, a turnover of 3.0 or higher is desired. With 1-hour limitations, a turnover of 6.0 or higher is desired.** These turnover rates, if vehicles park close to the time limitation, represent an occupancy of around 60% (three 2-hour periods, or six 1-hour periods in a ten hour day). With many retail businesses and services not opening or picking up until around 10 AM, this represents an average occupancy of 75% (six out of eight peak hours).

In terms of utilization of curbspace, and customer convenience, **a goal of 75% occupancy or less** typically provides the amount of availability that is conducive to a good customer base. Repeat customers can be reasonably confident that they will find parking near their destination at a level of 80% occupancy or less, and potential pass-by customers will not have to go too far away from businesses they are interested in visiting if they find a parking space within a block or two of the shop they choose to frequent.

Meters encourage better compliance with the time-limit regulations. A study several years ago, which included over 900 municipalities, found that overtime parking was reduced by more than 75% in half of the communities when meters were installed⁷. The same study found that the percentage of vehicles parking overtime reduced from 24 to 13 percent after meters were installed. Since enforcement efforts

⁷ Parking, Weant and Levinson, 1990 (p. 253)

are expensive, meters are a more cost effective way to encourage compliance with time limitations, though compliance is made further effective with additional enforcement efforts. We recommend that **meters should be strongly considered if non-compliance with posted time limitations exceeds 15% to 20%.**

General Findings

In observing the differences of parking patterns between unrestricted, time limited (sign only) and metered parking, in the Ballard study area, we conclude that:

- Compliance with time limitations is noticeably better for metered than unmetered parking.
- The average length of stay in unrestricted, un-signed spaces provides little turnover of parking spaces.
- Parking availability is generally better in those areas that meters are utilized.

Subarea Summaries

Table 9 provides a summary of the utilization data, by subarea and parking regulation.

Note that because field data was collected every half hour, for the quarter hour meters in the NW Market Street subarea a vehicle was only considered to be over limit if it was seen in the same space two or more times in consecutive checks. Therefore, the average length of duration shows as thirty minutes. The percent exceeding time limit was measured to be at zero (0), indicating that no vehicles were seen in these spaces in two consecutive checks. There may have been additional vehicles that utilized these spaces that were not recorded and there would be time between checks for vehicles to make very quick stops and not be included in the field count.

Table 9 Summary Table

Restriction at 1 PM	SUPPLY	AVG TURNOVER	AVG HRS USE PER SPACE	AVG,LENGTH OF STAY PER VEHICLE	Percent Exceeding Time Limitation	AVG UTIL, 8AM to 6 PM	AVT UTIL 10 AM to 6 PM	HOURS BETWEEN 8 AND 6 EXCEEDS 75%	HOURS BETWEEN 10 AND 6 EXCEEDS 75%
BALLARD AVE NW Study Subarea									
2 Hr Meter	14	6.29	5.36	0.85	0%	58%	70%	4.0	3.5
2 Hr Space	142	5.25	7.21	1.39	14%	75%	81%	7.5	7.5
Unrestricted Space	36	2.19	8.49	3.87	Na	87%	87%	9.0	7.0
LEARY AVE NW Study Subarea									
1 Hr Space	36	3.86	5.38	1.39	28%	57%	61%	0	0
2 Hr Space	11	3.91	6.41	1.64	19%	63%	73%	3.0	3.0
Unrestricted Space	62	2.90	7.94	2.74	Na	80%	82%	8.0	8.0
NW MARKET STREET Study Subarea									
2 Hr Meter	30	5.10	4.42	0.87	3%	44%	48%	0	0
Half-hour Meter	3	5.33	3.50	0.66	25%	35%	39%	0	0
Quarter-Hour Meter	3	5.67	2.83	0.50 ⁸	0%	28%	29%	2.5	2.0
1-Hour Space	7	7.14	5.50	0.77	12%	55%	61%	2.0	2.0
2-Hour Space	26	7.46	6.65	0.89	6%	69%	72%	4.0	4.0
Quarter-Hour Space	1	1.00	1.50	1.50	100%	67%	67%	1.5	1.5
NW 56 TH STREET Study Subarea									
2-Hour Meter	66	6.27	4.89	0.78	3%	49%	68%	0.5	0.5
Half-Hour Meter	2	10.00	8.75	0.88	45%	88%	94%	8.0	7.0
1-Hour Space	15	6.53	5.23	0.80	15%	52%	58%	0.5	0.5
2-Hour Space	13	6.92	7.88	1.14	6%	79%	81%	8.0	6.0
NW 57 TH STREET Study Subarea									
1-Hour Space	10	4.30	8.10	1.88	49%	83%	84%	7.5	6.0
2-Hour Space	5	4.40	4.60	1.05	0%	46%	51%	1.5	1.5
Half-Hour Space	3	3.00	2.33	0.78	56%	23%	29%	0	0
Unrestricted Space	103	1.91	8.20	4.29	na	83%	83%	8.5	7.0

Ballard Avenue NW Study Subarea

General Information:

- Largest on-street parking supply of any of the subareas at almost 200 spaces.
- Average utilization is relatively high (over 70% from 10 am to 6 pm for all blockfaces), with many of the blockfaces on Ballard Avenue exceeding 75% utilization much of the day.
- At least 20% (20% on the south side, 22% on the north side) of the vehicles parking on Ballard Avenue between NW Market Street and 22nd Ave NW exceed the posted 2-hour time limit.
- All of the unrestricted spaces experience very high utilization and low turnover rates, with extremely low turnover (two) of the unrestricted parking spaces on 22nd Ave NW, and average utilization nearing 100% on 22nd Ave NE between Shilshole and Ballard Avenues NW.
- While the loading spaces experience a high degree (39%) of stays over the posted time-limit, the average occupancy during the day is less than 50%.

Recommended modifications:

- Institute time limitations for the unrestricted spaces to create additional customer parking spaces
- Add pay stations for spaces that are currently time restricted. Parking spaces where current parking conditions warrant additional parking management tools include Ballard Ave NW between 22nd Ave NW and NW Market Street, both sides, and Ballard Ave NW between NW Vernon Place and 22nd Ave NW, south side.
- The north side of Ballard Ave NW between NW Vernon Place and 22nd Ave NW requires close monitoring, and may also require additional parking management measures to ensure consistency with parking management changes made to surrounding blockfaces.
- Continue to closely monitor remaining time-limited parking spaces.

Leary Avenue NW Study Subarea

General Information:

- There is a large multi-family/mixed-use project under construction in this subarea. There are no meters (except for at two metered loading spaces on the south side of Leary Ave NW between NW Vernon Place and NW Market Street).
- The percent overstaying the time limit in the 1-hour spaces on Leary Ave NW between NW Vernon Place and NW Market Street is quite high (approx 40%) and turnover of these spaces is less than five turns per space.
- The percent overstaying the time limit in the 1-hour spaces on Russell Avenue NW between NW Market Street and 20th Avenue NW is very high (approx 40%) and turnover of these spaces is less than ideal (around 4 turns per space). Utilization is also high, averaging around 84% between 10 am and 6 pm.
- The percent overstaying the time limit in the 2-hour spaces on 20th Avenue NW between NW Market Street and Russell Avenue NW is more than 20%, while utilization on the west side is exceedingly high with an average occupancy above 90% between 10 am and 6 pm.

- Occupancy of the unrestricted spaces is quite high (averaging over 80%) and average length of stay in these spaces is almost three hours.

Recommended modifications:

- Monitor the parking situation as the new development at the corner of Leary Avenue NW and 20th Avenue NW project becomes occupied.
- Institute time limitations for the unrestricted spaces (recommended limitation of 2-hours in most cases).
- Increase the 1-hour time-limits on Leary Avenue NW and Russell Avenue NW to 2-hours, regardless of parking management device.
- Consider phasing in paystations for time limited parking spaces, starting with Russell Avenue NW between NW Market Street and 20th Avenue NW, as well as 20th Avenue NW between NW Market Street and Russell Avenue NW.

NW Market Street Study Subarea

General Information:

- There are no unrestricted parking spaces in this subarea
- Meters seem to be keeping utilization at a good level (around 60%). The turnover is good and the percentage of vehicles exceeding the time-limit is very low. Utilization of metered spaces increases towards the core of the business district.
- Utilization is higher for the unmetered parking spaces.
- The very short time limitations (half-hour and less) experience a high percentage of vehicles exceeding the time limit.

Recommended modifications:

- Add pay stations for unmetered parking, and replace meters with pay stations.
- Modify short time limitations (half-hour and less) to 2-hour limitations. These should also be managed with pay stations as noted in the previous recommendation. This will allow for consistency in monitoring as well as user expectations for this corridor.

NW 56th Street Subarea

General Information:

- There is a large mixed-use development under construction at the west end of this subarea on 24th Avenue NW between NW 56th Street and NW 57th Street.
- The majority of the blockfaces in this subarea have 2-hour parking meters.
- Existing two-hour meters seem to be keeping utilization at a good level (less than an average of 70%). The most highly utilized meters are on the cross-streets of 20th Avenue NW and 22nd Avenue NW, between NW Market Street and NW 56th Street.
- Unmetered parking spaces experience a high utilization compared to the metered parking.
- The 1-hour signs on 22nd Avenue NW between NW 56th Street and NW 57th Street experience a fairly high utilization and a fairly high percentage of vehicles that stay past the posted time limit.

Recommended Modifications:

- Monitor on-street parking conditions as the new development project on west end of this subarea becomes occupied.
- Replace meters with paystations.
- The seven one-hour unmetered spaces on the west side of 22nd Ave NW between NW 56th and NW 57th Streets experience moderately high utilization and exceedance of time limitations. Paystations should also be added to this block face in anticipation of the impacts from the Ballard Commons park on on-street parking and to provide consistency in this area.
- Continue to monitor the time limited parking on 20th Ave NW between NW 56th and NW 57th Streets in light of development and changes to other on-street parking in the area.

NW 57th Street Subarea

General Information:

- The Ballard Commons park (under construction at time of report in September 2005) is expected to increase parking demand and change parking characteristics in this subarea.
- The unrestricted spaces experience very high utilization and low turnover in this study area.
- The 1-hour spaces on the south side of NW 57th Street between 22nd and 24th Avenues NW experience utilization over 80%.
- The 2-hour unmetered spaces on the west side of 20th Ave NW between NW 57th and NW 58th Streets experience low utilization and high turnover.

Recommended modifications:

- Add time restrictions to currently unrestricted spaces. Time limitations should be determined by block face, with 2-hour limits adjacent to the library and park, and 1-hour limitations near commercial businesses. Monitor compliance to see if paystations need to be added.
- Use pay stations to enforce time limitations on NW 57th Street between 22nd and 24th Avenues NW.
- Consider adding pay stations to the three half-hour spaces on the south side of NW 57th Street between 20th and 22nd Streets NW. Some high-turnover spaces are needed in this area, but currently the percent exceeding the time limits is quite high (56%).
- Monitor on-street parking as Ballard Commons park becomes utilized and the library and neighborhood service center become established in their new location. Add pay stations to time limited spaces if compliance with time limitations is low or utilization overly high.